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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,248	05/11/2001	Michael Salgaller	020093-000810US	7931

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EXAMINER	
EWOLDT, GERALD R	
ART UNIT	**PAPER NUMBER**
1644	

MAIL DATE	DELIVERY MODE
07/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/854,248	SALGALLER ET AL.	
	Examiner	Art Unit	
	G. R. Ewoldt, Ph.D.	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10,12-14,16-21 and 36-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10,12-14,16-21 and 36-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed 5/02/07 in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's amendment and remarks filed 5/02/07 have been entered.

2. Claims 10, 12-14, 16-21, and 36-39 are pending and being acted upon.

3. In view of Applicant's cancellation of Claims 40-43, the previous rejection of the claims under the first paragraph of 35 U.S.C. 112 for the introduction of new matter into the claims has been withdrawn. Additionally, the previous rejection under 35 U.S.C. 103(a) has also been withdrawn. A new rejection follows. Relevant arguments will be addressed.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 10, 12-14, 16-21, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,788,963 (1998, IDS) in view of Thurnher et al. (1997, IDS).

The '963 patent teaches a method for producing an anti-tumor cell, antigen specific cytotoxic T cell (CTL) response comprising administering to a patient an effective amount of human DCs, said DCs having been exposed *in vitro* to the prostate tumor associated antigenic fragment PSM-P1 (SEQ ID NO:1) derived from various sources including tumor cell lysates and purified antigens (see particularly column 8, PROSTATE SPECIFIC ANTIGENS FOR PRESENTATION BY DC). The reference further teaches that the DCs are obtained from peripheral blood, have been cryopreserved,

have been obtained from a healthy HLA matched donor, are extended life span, and can be administered to a metastatic prostate cancer patient (see particularly the Claims).

The reference teaching differs from the claimed invention only in that it does not teach the use of BCG in the *in vitro* exposure of the DCs to antigen.

Thurnher et al. teaches the *in vitro* maturation and activation of DCs with BCG (see particularly pages 129-130, RESULTS, *BCG mycobacteria induce maturation of DCs*). The reference further teaches that DCs matured in the presence of BCG may also take up tumor antigens and thus, then be capable of activating tumor-reactive T cells in a cytokine milieu that favors the generation of a strong anti-tumor CTL response (see particularly page 131, DISCUSSION). The reference concludes by teaching *ex vivo* tumor-antigen loading of DCs cultured in BCG and reinfusion of said DCs into a patient (see particularly page 133, column 2).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to perform a method for producing an anti-tumor cell, antigen specific CTL response comprising administering to a patient an effective amount of human DCs, said DCs having been exposed *in vitro* to the prostate tumor associated antigenic fragment PSM-P1 (SEQ ID NO:1), said DCs having been obtained from peripheral blood, having been cryopreserved, having been obtained from a healthy HLA matched donor, having been extended life span, and having been administered to a metastatic prostate cancer patient, as taught by the '963 patent. One of ordinary skill in the art would have been motivated to add BCG to the *in vitro* exposure of DCs to antigen for an improved anti-tumor, antigen specific CTL response, given the teachings of Thurnher et al. that: 1) BCG causes the maturation of DCs and thus, the DCs are then capable of activating tumor-reactive T cells and a strong anti-tumor CTL response, and 2) BCG could be used in DC based tumor immunotherapy, e.g., *ex vivo* tumor-antigen loading of DCs cultured in BCG and reinfusion of said DCs into a patient. Regarding Claim 36, said claim recites only the routine optimization of the claimed method which falls well within the purview of one of ordinary skill in the art at the time of the invention.

Applicant's arguments, filed 5/02/07, have been fully considered but they are not persuasive. Applicant again argues that "Thurnher et al. do not disclose that the *in vitro* exposure of DCs to BCG provides a cytokine milieu that favors the generation of a strong anti-tumor CTL response".

Applicant is advised that the Examiner's responsibility is simply to meet the limitations of the claims. The reasons established by the Examiner need not be Applicant's reasons. In this case, the combined references need only teach the *ex vivo* culture of a DC in with antigen plus BCG for reinfusion into a patient. The primary reference, the '963 patent, teaches all the required limitations save culture in BCG. Thurnher et al. teaches the additional benefits of culturing DCs in BCG as set forth in the rejection. Any result of said culture and reinfusion is a result of the method and immaterial of the reasons/motivation for performing the method. Thus, arguments regarding cytokine milieu or additional CD4+ T cell activation are simply irrelevant.

Regarding the cite at page 131 of the Thurnher et al. reference, said cite discusses the mechanisms that occur *in vivo*, but it is clear that the same mechanisms could be recreated *in vitro*, thus, the teaching in the final paragraph at page 133 regarding *ex vivo* tumor-antigen loading of DCs cultured in BCG and reinfusion of said DCs into a patient.

As the Ramoner et al. reference is no longer employed in the rejection, indeed, it is simply not required, Applicant's remarks regarding the reference have been rendered moot.

6. No claim is allowed.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Gerald Ewoldt whose telephone number is (571) 272-0843. The examiner can normally be reached Monday through Thursday from 7:30 am to 5:30 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (571) 272-0841.

8. **Please Note**: Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

7/1/07

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Primary Examiner
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